



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/815,670

03/23/2001

Hiroshi Yoshida

09792909-4825

5768

26263

7590

02/12/2003

SONNENSCHN NATH & ROSENTHAL

P.O. BOX 061080

WACKER DRIVE STATION

CHICAGO, IL 60606-1080

EXAMINER

LEUNG, QUYEN PHAN

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 02/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

09/815,670

Applicant(s)

YOSHIDA ET AL.

Examiner

Quyen P. Leung

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-9,11-17 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-9,11-17,19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to applicant's amendment filed 11/25/02, claims 1, 9 and 17 have been amended and claims 2, 10 and 18 canceled. Claims 1, 3-9, 11-17, 19-24 are pending.

Response to Arguments

2. Applicant's arguments filed 11/25/02 have been fully considered but they are not persuasive. Applicant argued that "...Kume et al, which does not teach or even suggest that the current injection region should have the stripe width from $1\text{ }\mu\text{m} \leq W_{\text{st}} \leq 3\text{ }\mu\text{m}$. It also does not teach or even suggest that the component ratio of Al to be in the range of $0.15 < x < 0.30$. The range of current non-injection region described Kume et al does not have any correlation to how the laser can be stimulated in the way of weak index type laser that is the main aspect of claim 9. Kume et al fails to disclose or even to suggest the importance of the stripe width for a single lateral mode in the current injection region and the composition of Al for the current non-injection region."

In response, applicant's attention is directed to Kume's col. 16 lines 37-56 where the stripe width of 2 microns is taught, and the component ratio of Al in the current non-injection region (1517) to be 0.25, which is in the claimed range. The importance of the stripe width for single mode is discussed in col. 16 lines 53-56. Regarding the weak index type laser, it is not understood what range applicant is referring to. Kume et al is a weak index type laser to the extent that the claimed

structural limitations allow, because Kume meets all the claimed structural limitations.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

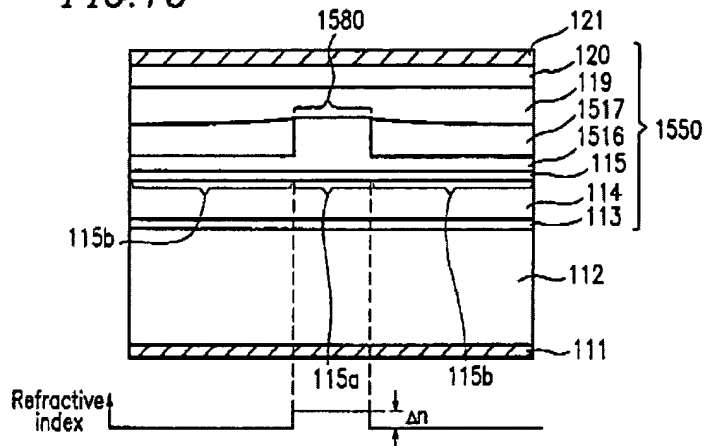
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-9, 11-17, 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Kume et al (5,923,690). Kume teaches the claimed invention. For example, note figure 15 which illustrates a semiconductor laser light emitting device comprising a stacked film composed of a stack of group III nitride semiconductor films (1550) each containing at least one kind selected from aluminum, gallium, indium and boron, wherein an upper portion (1516) of the stacked film is formed into a ridge-like stripe (1580), to form a current injection region, a current non-injection region (1517)

formed on both sides of the ridge-like stripe (1580) and at least part of the current non-

FIG. 15



injection region (1517) is

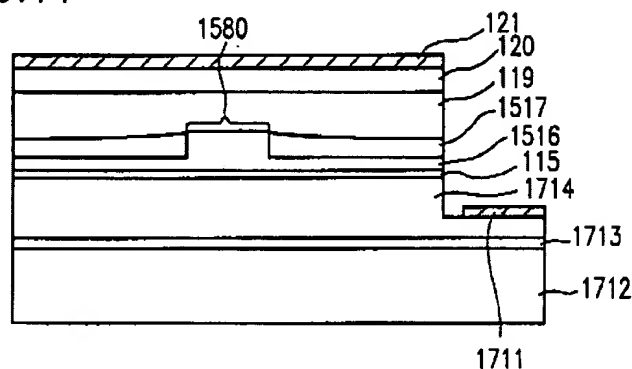
made from a material ($\text{Al}_{x=0.25}\text{Ga}_{1-x}\text{N}$) expressed by a chemical formula AlGaN , the improvement wherein the component “x” of Al is specified at a value in a range of $0.15 < x < 0.30$, so that the semiconductor laser light emitting device is configured as a weak index type pulsation semiconductor laser light emitting device.

Note also figure 17.

Kume et al teaches the same ranges as claimed by applicant, see col. 15 lines 24-26 and lines 50-55. Furthermore, applicant discusses the device being configured as an index-guided type (see col. 16 line 20), as a gain-guided type (see col. 16 line 35)

and as a weak index type (see col. 16 lines 46-

FIG. 17



51).

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Art Unit: 2828

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quyen P. Leung whose telephone number is (703) 308-0545. The examiner can normally be reached on 8:30-5:00, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Quyen P. Leung
Primary Examiner
Art Unit 2828

QPL
February 10, 2003